

## REMARKS

This paper is filed in response to the Non-final Office Action mailed on July 10, 2008 where the Examiner (i) objected to each of the drawings, disclosure and claims for reasons provided herein and (ii ) rejected each of claims 22-35, 41, and 42, under 35 U.S.C. §102(b). Applicant respectfully submits herein clarification of the drawings and specification so as to cure the Examiner's rejection and respectfully asks that the objection of the claims be held in abeyance until allowable subject matter has been indicated. Applicant further provides herein that the references cited in the Office Action do not teach each and every claim element of the pending claims so as to support a rejection under 35 U.S.C. §102(b). In view of the arguments provided below, Applicant respectfully requests withdrawal of the Examiner's rejections and allowance of the claims, as provided.

### Summary of the Examiner's Objections and Rejections

The Non-final Office Action of July 10, 2008, objected to each of the drawings, abstracts, and claims. Referring first to the drawings, the Office Action stated that the drawings failed to comply with 37 C.F.R. 1.84(p)(5) and 1.83(a). Specifically, the drawings were said to include the reference signs "T", which was not provided within the specification. And, the reference sign "T" was provided in the specification but not shown on the drawings. Also, the drawings were alleged to not show (a) the rotary member, (b) a bearing with a pointed inner profile or a flat inner profile with a chamfered inner race, and (c) each bearing being angled with respect to the shaft such that it contacts the shaft in at least two points.

The Office Action also objected to both the abstract and the specification for the inclusion of the term “means.” This “legal phraseology” was argued to invoke 35 U.S.C. 112, sixth paragraph means-plus-function language to define the invention. Such phraseology was said to fail to “explicitly state, with reference to the terms and phrases of the claim element, what structure, materials, and acts performed the function recited in the claim element.”

Finally, claims 37-42 and 23, 24, 27-40, and 42 were separately objected to for informalities. Claims 37-42 were objected to for evoking sixth paragraph means-plus-function language to define the Applicant’s invention, in accordance with the foregoing objection to the specification. Claim 23 was objected to for a grammatical error in the phrase “by a rotary member at least one point along the length.” Claims 27, 28, 33, 34, 40, and 42 were objected for lack of clarity in the phrase “the bearing.” Claim 29 was objected to for a grammatical error in the phrase “it contacts the shaft at least two points.” Finally, claims 23, 30, 32, and 38 were objected to for lacking antecedent basis for one or more of the following phrases: “the length,” “the other of the outer bearing,” “the central bearing,” “the inclined bearings,” “the shaft axis,” “the outer races of the bearings,” and “the spring mechanism.” Appropriate correction was solicited.

In addition to the foregoing objections, the Examiner rejected claims 22-32, 41, and 42 as anticipated by Dumore Company (FR 1.562.416) and claims 22-35 as anticipated by Uhing (U.S. 4,253,342). The Dumore reference was said to anticipate each of the elements of Claims 22-32, 41 and 42 as follows:

Dumore Company disclose [sic] an assembly with a motor driven unthreaded shaft (10, 14), at least one bearing (15) mounted obliquely to the shaft, an actuator (30, 46) linked to at least one of

the bearings. In page 8 of the translated document, it is disclosed that there may be more or less than 4 bearings. The assembly also has a rotary member (31). As to claims 25-32, see Figures 6a, 6c and the relevant portions of the specification. As to claim 41, see pages 5 and 6 of the translated document. As to claim 42, the bearing has biasing means (21).

Accordingly, these claims were rejected under 35 U.S.C. §102(b).

Claims 22-35 were also argued to be anticipated by Uhing as follows:

Uhing discloses an assembly having a motor drive unthreaded shaft (11), at least one bearing (10, 10'), and an actuator 916) [sic]. As to claims 23 and 24, see Figures 1-3b. As to claims 25-32, see Figure 4. As to claim 33, the bearing is spring loaded as seen in Figure 6. As to claims 34 and 35, the bearing is housed within a carriage (16, 16') and connected to an actuator.

Accordingly, these claims were also rejected under 35 U.S.C. §102(b).

#### Traversal of the objections

In response to the objections of the drawings and specification, the appropriate corrections have been made and provided herein. While the Office Action also objected to the claims for similar reasons, Applicant respectfully requests that these objections be held in abeyance until prosecution is complete.

Turning first to the drawings: Figure 6 has been amended to properly reflect Reference sign “T.”

With regard to the objection of the drawings under 1.83(a), Applicant respectfully asserts that the drawings do sufficiently support the subject matter to be patented. Under 35 U.S.C. 113, an Applicant is only required to furnish a drawing where necessary for the understanding of the invention. While 37 CFR 1.83(a) certainly sets forth a stricter requirement, even this rule

provides that conventional features which are disclosed within the description are not required to be in great detail. Indeed, all that is necessary is a graphical symbol. In view of this, Applicants respectfully assert that the recited features are, in fact, represented by the figures. Specifically, figure 1 clearly illustrates an apparatus of the present invention where the carriage 4 provides the bearings and mechanism for biasing the actuator 8 along the shaft 2. Applicant respectfully asserts that the carriage 4, actuator 8, shaft 2, and guide 5 of this figure, in combination with the teachings of the specification, set forth at least a graphical symbol illustrating the rotary member along with means for reversing direction of travel and the actuator along the shaft and the adjustable biasing means. With regard to the bearings themselves, Applicant asserts that figures 3-7, again in combination with the disclosure, clearly set forth every feature of this aspect of the invention, or at least provide a graphical symbol for the same. To this end, Applicant respectfully disagrees that the recited features are not disclosed in the present drawings. Rather, they are either clearly provided or provided as graphical symbols.

Regarding the objections to the specification, the terms “means” has been entirely eliminated within both the abstract and the specification. Where necessary, the sentences have been rewritten to indicate the proper structure, material and/or acts that perform the recited function. Each of these items were previously provided within the specification such that no amendment provides new matter to the application. Applicant respectfully asserts that, in this amended form, the structure, material and function of each element of the invention is clearly and explicitly provided so as to satisfy MPEP 608.01 (o), as recited in the pending office action.

Finally, the Applicant respectfully requests that the objections to the claims be held in abeyance until the conclusion of prosecution. As recited in 37 C.F.R. 1.111, an Applicant’s

reply is complete even if the Applicant requests that “objections or requirements as to form not necessary to further consideration of the claims be held in abeyance until allowable subject matter is indicated.” In the present case, the objections to the claims relate to formalities not germane to the subject of the invention. Accordingly, Applicant respectfully requests that these corrections be held in abeyance until allowable subject matter has been indicated.

Applicant’s Argument Traversing the Rejections under 35 U.S.C. §102(b)

Applicant respectfully asserts that both of the references cited by the Examiner do not support a rejection under 35 U.S.C. 102(b). As required by this statue, neither Dumore nor Uhing specifically account for each and every recited claim element. These two references do not even relate to the medical device art of the claimed present invention. Rather, they both provide for a bearing technology taught for use only in industrial applications. For the specific reasons shown below, Applicant, therefore, respectfully requests withdrawal of these rejections and allowance of the claims, as currently pending.

*Rejection of claims 22-32, 41 and 42 as anticipated by FR 1.562.416*

The cited reference, The Dumore Company (FR 1.562.416), does not teach a medical device having a syringe driver assembly as claimed. Claims 22-32, 41 and 42 all specifically relate to a medical device having a syringe driver assembly for imparting translational movement to a syringe plunger. The specific aspects of the invention include (1) a motor driven unthreaded shaft, (2) at least one bearing obliquely mounted to the shaft and having at least one contact point therewith, and (3) an actuator linked to at least one bearing and for contact a thumbplate of a syringe plunger. Rotation of the shaft causes movement of the actuator-linked bearing along the

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shaft to affect movement of the actuator. This ultimately provides a linear force against the syringe plunger, which provides for a controlled discharge of fluid within the syringe.

The Dumore Company (FR 1.562.416) refers to industrial applications (see Figures 7-12) for conversion of a torque force into a linear force using a bearing technology. There is no teaching within Dumore for a syringe driver assembly or any aspect of an actuator that may contact a thumbplate of a syringe plunger. Indeed, Dumore has no teaching for any applicability to medical devices. This fact was acknowledged in the PCT International Preliminary Report on Patentability, which was provided to the USPTO by the Applicant on June 8, 2006. (See page 5 stating that Dumore relates to an industrial application and does not provide for a syringe driver assembly or any medical device.)

To hold that a claim is anticipated under 35 U.S.C. §102(b), a single prior art reference must teach each and every element as set forth in the claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). In the present case, each of claims 22-32, 41 and 42 specifically require a syringe driver assembly. Dumore does not disclose such a syringe driver assembly. Therefore, Dumore does not teach each and every element as set forth in the claim and cannot anticipate every limitation of claims 22-32, 41 and 42.

Additionally, page 5 of the International Preliminary Report on Patentability also states that, because Dumore relates only to industrial applications, it would not be evident to combine it with U.S. 5,006,112, which relates to a medical syringe pump. In other words, because the technical areas are so varied, it would be inappropriate to combine Dumore with any syringe

pump patent in an obviousness rejection. For at least these reasons, Applicant respectfully requests withdrawal of the pending rejections and allowance of the claims as filed.

*Rejection of claims 22-35 as anticipated by US 4,253,342*

Similar to Dumore, Uhing (U.S. Patent 4,253,342) does not relate to a medical device having a syringe driver assembly. As noted above, claims 22-35 of the present application all relate to a medical device having a syringe driver assembly for imparting translational movement to a syringe plunger. The specific aspects of the invention include (1) a motor driven unthreaded shaft, (2) at least one bearing obliquely mounted to the shaft and having at least one contact point therewith, and (3) an actuator linked to at least one bearing and for contact a thumbplate of a syringe plunger. Rotation of the shaft causes movement of the actuator-linked bearing along the shaft to affect movement of the actuator. This ultimately provides a linear force against the syringe plunger, which provides for a controlled discharge of fluid within the syringe.

Uhing does not contemplate any type of a medical device, let alone a syringe driver assembly. Rather, Uhing refers to roller cage assemblies for transforming rotary movement of a smooth shaft into a thrust movement by means of a rolling nut. There is no teaching within Uhing for a syringe driver assembly or an aspect of an actuator that may contact a thumbplate of a syringe plunger.

To hold that a claim is anticipated under 35 U.S.C. §102(b), a single prior art reference must teach each and every element as set forth in the claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). In the present case, each of claims 22-35 specifically require a syringe driver assembly. Uhing relates to industrial

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applications of a roller cage assembly and does not disclose such a syringe driver assembly, or any type of medical device. Therefore, Uhing does not teach each and every element so as to anticipate claims 22-35

Moreover, much like with Dumore, the technological field of Uhing is related to industrial applications, not medical devices. To this end, the technological area of Uhing is so far removed from that of the present invention, Uhing would not be an appropriate reference for an obviousness rejection either. Accordingly, and for at least these reasons, Uhing does not anticipate every limitation of claims 22-35 and Applicant respectfully requests withdrawal of the pending rejections and allowance of the claims as filed.

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### Conclusion

Applicant has corrected the Examiner's objections to the drawings and specifications and respectfully asked that the objections to the claims be held in abeyance until prosecution is complete. Furthermore, Applicant has provided in the arguments presented above, that pending claims 22-35, 41 and 42 of the present application are not anticipated by either Dumore or Uhing because both of these references fail to teach or suggest all of the claim elements.

Applicant, thereby, contends that this application is in a condition for allowance and an early notice to this effect is earnestly solicited. Should Examiner have any questions or comments with respect to this response, it is respectfully requested that the Examiner telephone the undersigned at (215) 299- 2772 to discuss.

To the extent there are any fees required in connection with the receipt, acceptance and/or consideration of this paper and/or any accompanying papers submitted herewith, including extension fees, the Commissioner is authorized to charge all such fees to Deposit Account 50-1943.

Respectfully submitted,  
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